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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/973,200	04/12/2001	James David Duford	JORC117322	3493

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[REDACTED] EXAMINER

PETERSON, KENNETH E

[REDACTED] ART UNIT [REDACTED] PAPER NUMBER

3724

DATE MAILED: 09/29/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/973,200

Applicant(s)

DUFORD ET AL.

Examiner

Kenneth E Peterson

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extension of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 22 August 2003.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) 7-15,20-23 and 26 is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1-6,16-19,24 and 25 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) The proposed drawing correction filed on _____ is: a) approved b) disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) All b) Some * c) None of:
1. Certified copies of the priority documents have been received.
2. Certified copies of the priority documents have been received in Application No. _____.
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) The translation of the foreign language provisional application has been received.
- 15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) Notice of References Cited (PTO-892) 4) Interview Summary (PTO-413) Paper No(s). _____.
2) Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) Notice of Informal Patent Application (PTO-152)
3) Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____. 6) Other: _____

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-6, 16-19, 24 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Peot '715 in view of Embree et al. '195 or Japanese Patent 411313464 to Nakajima et al.

In figures 1 and 2, Peot shows a circular saw with all of the recited limitations except for a motor having a length-to-diameter ratio of between 1:1.5 and 1:4.5. However, Embree and Nakajima show that it is common to use such motors in tools. It would have been obvious to one of ordinary skill in the art to have modified Peot to use Embree's or Nakajima's motor, in order to "decrease unwanted noise and increase operating efficiency" (see Embree's abstract and column 1) or to achieve compactness and light weight with increased inertia (see Nakajima's abstract). The exact measurements of the device and the exact range of angles it can be employed at are matters of design choice which can be optimized for any given use, and it would have been obvious for Peot to do so. It is noted that the measurements and angle ranges recited by Applicant are typical in the art. For example, Examiner testifies that his own circular saw, purchased in 1998, has a base width of 5 and 3/8 inches, which is "substantially" 5 inches.

3. Applicant's arguments have been fully considered but they are not persuasive.

Applicant argues that there is no suggestion or teaching to modify the base reference. Examiner disagrees.

SUGGESTION - Embree specifically recommends that his motor be employed on various hand-held or hand-operated tools (see Embree's abstract and column 1).

MOTIVATION – Embree states that his motor is advantageous for the following reasons;

- Decreases unwanted noise (abstract)
- Increased operating efficiency (abstract)
- Compact (column 2, line 66)
- Low weight (column 2, line 66)
- Low temperature (column 2, line 66)
- Higher torque (column 2, line 66)
- Decreased vibration (from the lower RPM, see column1).

Likewise, the Japanese patent to Nakajima provides similar motivations.

From this, one can see there is both a suggestion to modify and also several motivations to modify

Applicant argues that Embree does not disclose a *motor assembly* having a length to diameter ratio of between 1:1.5 and 1:4.5. It's true that Embree does not explicitly state this, but it is wrong to say that Embree is "silent" on this issue, since Embree does recite the dimensions of many of the constituent parts. For example, in column 4, the stator (16) is stated to have a diameter (Do) of 4.75 inches and an axial thickness (T) of 0.375 inches. One can see, from the various figures, that the *motor assembly* (not including shafts) is about 10 times as thick, or about 3.75 inches in the

axial direction, and the diameter is perhaps an inch larger than the stator, or 5.75 inches for a ratio of 1:1.5, which is within Applicant's cited range. Of course, this is an approximation, but then again, Applicant uses the term "substantially", so there is room for such errors. Furthemore, patents such as Nakajima (see figure 1) show advantageous motors that are more solidly within Applicant's cited ranges.

This is not to say that the above rejection is the nail in Applicant's coffin. One distinction when compared to Peot is that Peot's motor is positioned radially beyond the saw blade, whereas Applicant's motor is positioned radially within the saw blade. Neither Peot nor Embree nor Nakajima suggest that the motor should be positioned within the radius of the saw blade.

4. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

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the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kenneth Peterson whose telephone number is 703-308-2186. The examiner can normally be reached on Monday-Thursday, 7:30-4:30. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Allan Shoap can be reached at 703-308-1082.

All responses are encouraged to be by fax at 703-872-9306. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-1148.

kp

September 23, 2003



KENNETH E. PETERSON
PRIMARY EXAMINER